

CLAIMS

1. In a computer system, a method of encapsulating multimedia content data,
multimedia content description data, and program instruction code into an
5 aggregated data representation comprising a logical structure, the method
comprising:
storing on a storage device, information about the multimedia content data, the
multimedia content description data, and the program instruction code to
form a main header section (300) in the logical structure;
10 storing on the storage device, multiple block headers for all multimedia content
data, multimedia content description data, and the program instruction
code to form a block headers section (301) in the logical structure; and
storing on the storage device, multiple data blocks for all multimedia content data,
multimedia content description data, and the program instruction code to
15 form a data blocks section (302) in the logical structure.
2. Method according to claim 1, wherein:
the block headers sections (301) comprise a scene block header (400);
the block headers sections (301) comprise a header selected from the group
20 consisting of an image resource block header (500), a text resource block
header (550), a mesh resource block header (600), and a video resource
block header (650);
the data blocks section (302) comprise a scene data block (700);
the data blocks section (302) comprise a data block selected from the group
25 consisting of an image resource data block (1200), a text resource data

block (1250), a mesh resource data block (1300), and a video resource data block (1350);

the number of data blocks in the data blocks section (302) is equal to the number of block headers in the block headers section (301) with an empty external_link field (324); and
the program instruction code controls playback of the multimedia content.

3. Method according to claim 1, further comprising:
determining the storing order of the resources, for the different multimedia types,
e.g. audio, video, image and text, providing efficient streaming transmission;
compressing the data in some of the data blocks section using appropriate compression schemes, e.g. as ZLIB, PNG or JPEG; and
providing different scaled content representations of one or more scenes,
depending on different hardware profiles of the destination computers (101), e.g. bitrate, screen, language, and/or machine.

4. Method according to claim 1, wherein the logical structure is a XML formatted structure.

5. Method according to claim 1, further comprising transferring information selected from the group consisting of the aggregated data representation and the logical structure across a transport medium (105) to one or more destination computers (101).

6. Method according to claim 3, further comprising providing linking between multiple files with multimedia content by use of an external_link field (324) in the block headers section (301).
- 5 7. In a computer system, a method of retrieving multimedia content data, multimedia content description data, and program instruction code from an aggregated data representation stored on a storage device, the data representation comprising a logical structure encapsulating the multimedia content data, multimedia content description data, and program instruction code, the method comprising reading
10 from the storage device:
a main header section (300) of the logical structure, the main header section having information about the multimedia content data, the multimedia content description data, and the program instruction code;
multiple header blocks from the header section (301) of the logical structure, the
15 multiple block headers comprising information about multimedia content data, multimedia content description data, and program instruction code;
and
multiple data blocks from the data section (302) in the logical structure, the
multiple data blocks comprising multimedia content data, multimedia
20 content description data, and program instruction code.
8. Method according to claim 7, wherein:
the block headers sections (301) comprise a scene block header (400);
the block headers sections (301) comprise a header selected from the group
25 consisting of an image resource block header (500), a text resource block header (550), a mesh resource block header (600), and a video resource block header (650);

the data blocks section (302) comprise a scene data block (700);
the data blocks section (302) comprise a data block selected from the group
consisting of an image resource data block (1200), a text resource data
block (1250), a mesh resource data block (1300), and a video resource data
5 block (1350);
the number of data blocks in the data blocks section (302) is equal to the number
of block headers in the block headers section (301) with an empty
external_link field (324); and
the program instruction code controls playback of the multimedia content.

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9. Method according to claim 7, wherein the logical structure is a XML formatted
structure.

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10. Method according to claim 7, further comprising receiving information selected
from the group consisting of the aggregated data representation and the logical
structure across a transport medium (105) on a destination computer (101), for
rendering the content using a renderer (103).

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11. Computer-readable aggregated data representation encapsulating multimedia
content data, multimedia content description data, and program instruction code,
the aggregated data representation comprising a logical structure stored on a
computer readable storage device, the logical structure comprising:
a main header section (300) comprising information about the multimedia content
data, multimedia content description data, and program instruction code in
25 a logical structure that defines the aggregated data representation;

- a block header section (301) comprising multiple block headers for the multimedia content data, multimedia content description data, and program instruction code; and
- a data block section (302) comprising multiple data blocks for all multimedia content data, multimedia content description data, and program instruction code.
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12. Computer-readable aggregated data representation of claim 11, wherein:
- the block headers sections (301) comprise a scene block header (400);
- 10 the block headers sections (301) comprise a header selected from the group consisting of an image resource block header (500), a text resource block header (550), a mesh resource block header (600), and a video resource block header (650);
- the data blocks section (302) comprise a scene data block (700);
- 15 the data blocks section (302) comprise a data block selected from the group consisting of an image resource data block (1200), a text resource data block (1250), a mesh resource data block (1300), and a video resource data block (1350);
- the number of data blocks in the data blocks section (302) is equal to the number
- 20 of block headers in the block headers section (301) with an empty external_link field (324); and
- the program instruction code controls playback of the multimedia content.
13. Computer-readable aggregated data representation of claim 11, wherein the logical
- 25 structure is a XML formatted structure.

14. A computer-readable storage medium holding instructions for encapsulating multimedia content data, multimedia content description data, and program instruction code into an aggregated data representation comprising a logical structure, the instructions comprising:
- 5 storing on a storage device, information about the multimedia content data, the multimedia content description data, and the program instruction code to form a main header section (300) in the logical structure;
- storing on the storage device, multiple block headers for all multimedia content data, multimedia content description data, and the program instruction
- 10 code to form a block headers section (301) in the logical structure; and
- storing on the storage device, multiple data blocks for all multimedia content data, multimedia content description data, and the program instruction code to form a data blocks section (302) in the logical structure.
- 15 15. A computer-readable storage medium holding instructions for retrieving multimedia content data, multimedia content description data, and program instruction code from an aggregated data representation stored on a storage device, the data representation comprising a logical structure encapsulating the multimedia content data, multimedia content description data, and program instruction code,
- 20 the instructions comprising reading from the storage device:
- a main header section (300) of the logical structure, the main header section having information about the multimedia content data, the multimedia content description data, and the program instruction code;
- multiple header blocks from the header section (301) of the logical structure, the
- 25 multiple block headers comprising information about multimedia content data, multimedia content description data, and program instruction code;
- and

multiple data blocks from the data section (302) in the logical structure, the multiple data blocks comprising multimedia content data, multimedia content description data, and program instruction code.